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MINISTRY OF THE ENVIRONMENT

INPUT TO THE
DEVELOPMENT OF
RESOURCES POLICY FIELD STRATEGY



JANUARY 5, 1978

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PROGRAM PLANNING AND EVALUATION BRANCH

INDEX

	<u>Page No.</u>
INTRODUCTION	(i)
SUMMARY OF MOE GOALS, OBJECTIVES AND OUTPUTS	1
MINISTRY OUTPUTS:	
. MUNICIPAL AND PRIVATE POLLUTION MANAGEMENT	2
. INDUSTRIAL POLLUTION MANAGEMENT	3
. WATER AND SEWAGE WORKS CONSTRUCTION	4
. OPERATION OF WATER AND SEWAGE WORKS	5
. RESOURCE RECOVERY	6
. RESEARCH AND DEVELOPMENT	7
. ENVIRONMENTAL CONTROL OF PESTICIDES	8
. NOISE CONTROL	9
PRIORITIES	10
RELATIONSHIP WITH OTHER MINISTRIES	16
GENERAL GOVERNMENT OBJECTIVES AND STRATEGIC THRUSTS	18
STRATEGIC THRUSTS	19

INTRODUCTION

The Ministry of the Environment brief as input to the Resources Policy Field Strategy has been prepared in a revised format to that of the original request. Part III of the suggested format is presented first, since it sets the framework for the other parts.

Page 1 summarizes the three levels describing the Ministry and its operation. Pages 2 to 9 describes the Ministry outputs in more detail, highlighting the major components, constraints on program delivery and future plans. The Ministry approach to priority setting is outlined on pages 10 to 15.

Part VI of the suggested format, Description of Relationship with other Ministries is summarized on pages 16 and 17.

The General Government Objectives (Part I) are dealt with on page 18 and an outline of Strategic Thrusts (Part II) from the Ministry of the Environment's point of view are provided on pages 19 and 20.

SUMMARY OF MOE GOALS, OBJECTIVES AND OUTPUTS

MOE GOALS (Objectives)	MOE OBJECTIVES (Policies)	OUTPUTS (Programs)
<p>The Ministry is responsible for provincial control over the damaging use of land, water and air for disposal of waste and contaminants. The goals are as follows:</p> <p>1) Correction of harmful effects to the natural environment, and prevention of future damages to the natural environment and human health, as a consequence of the disposal of waste and contaminants.</p> <p>2) Management of land, water and air resources in support of 1).</p> <p>3) Greater use of material and energy resources presently disposed of as waste.</p>	<ul style="list-style-type: none"> · Identify strategies and prepare pertinent legislation. · Develop and establish criteria, guideline and standards for air and water quality and land use. · Develop, apply and enforce procedures to abate and control the disposal of waste and contaminants from public, commercial and industrial sources. · Assist communities in one or more features of planning, financing construction and operation of water and sewage works and solid waste and resource recovery facilities. · Develop and apply practices of land, water and air resource management. · Develop, demonstrate and assess resource recovery as a component of integrated waste management systems. 	<ul style="list-style-type: none"> · Municipal and Private Pollution Management · Industrial Pollution Management · Water and Sewage Works Construction · Operation of Water and Sewage Works · Resource Recovery · Research and Development · Environmental Control of Pesticides · Noise Control

MUNICIPAL AND PRIVATE POLLUTION MANAGEMENT

ROLE: To plan approaches, establish standards and criteria and enforce abatement strategies in order to minimize adverse effects of municipal and private pollution on human health and the natural environment.

COMPONENTS:

- Development of abatement strategies;
- Development of guidelines, criteria and standards for emissions or discharges and environmental quality;
- Approve and/or license treatment and disposal facilities;
- Inspection of facilities for compliance;
- Monitoring environmental quality;
- Undertake assessments to identify pollution sources;
- Maintaining information systems;
- Responding to complaints;
- Input to land use planning and development.

RESULTS:

The primary emphasis is on assessment and compliance of municipal water and sewage works, municipal waste disposal sites and private sewage systems, (although there are a number of other concerns).

• Communal sewage works	709
• Communal water works	1,430
• Communal waste disposal sites	2,844
• Private systems installed annually	27,000
• Application for new and alteration or extentions to water and sewage works and waste disposal sites annually	7,000
• Environmental complaints	6,000

PLANS AND CONSTRAINTS:

As the Ministry proceeds to delegate construction and operation of water and sewage works the efforts towards monitoring compliance to Provincial standards will have to be expanded.

INDUSTRIAL POLLUTION MANAGEMENT

ROLE: To plan approaches, establish standards and criteria, and develop and enforce abatement strategies in order to minimize the adverse effects from industrial pollution on human health and the natural environment.

COMPONENTS:

- Development of abatement strategies;
- Development of guidelines, criteria and standards for emissions or discharges and environmental quality;
- Approve and/or license treatment and disposal facilities;
- Inspection of facilities for compliance;
- Monitoring environmental quality;
- Undertake assessments to identify pollution sources;
- Maintaining information systems;
- Responding to complaints;
- Responding to spills and contingencies;

RESULTS:

- Applications for approval of industrial treatment facilities 1,000
- 170 specific industries were under evaluation for review of pollution problems in 1977.
- Particular emphasis has been placed on pulp and paper, petrochemical and iron and steel industries.
- Day to day control of air emissions is provided through the air pollution index and alert system.

PLANS AND CONSTRAINTS:

A greater emphasis is being placed on problems related with newly emerging hazardous contaminants.

WATER AND SEWAGE WORKS CONSTRUCTION

ROLE: Through construction or assistance with construction of water and sewage works the Ministry endeavors to remove water-borne health hazards, protect the environment, accommodate growth and provide for community enhancement.

COMPONENTS:

- Ministry construction of water and sewage works on behalf of municipalities with grants up to 75%;
- Grants of 15% to restructured municipalities for the purpose of increasing serviced lots;
- Grants for the repair or renewal of private systems to resolve health and environmental problems where it is cost effective;
- Grants up to 75% to municipalities undertaking to do their own construction which otherwise would have been submitted to the Ministry;

RESULTS:

- Ministry construction:
 - 27 new projects accepted in 1977
 - 370 projects underway at various stages
- Grants to restructured municipalities:
 - 10 municipalities in 1977
- Grants for private systems:
 - New programs being initiated
 - 2 communities at present
- Municipal construction:
 - New programs being initiated
- Provides for 5,500 man-years of direct employment.

PLANS AND CONSTRAINTS:

- The Ministry is encouraging municipalities to undertake their own construction;
- Flexibility within this program is constrained by the committed construction projects for future years.

OPERATION OF WATER AND SEWAGE WORKS

ROLE: Under agreements with municipalities the Ministry operates water and sewage works for the protection of public health and the environment.

COMPONENTS:

- The Ministry operated 321 plants as of April 1977;
- 32 new plants will be operated in 1977;

PLANS AND CONSTRAINTS:

- The Ministry is actively encouraging municipalities to operate their own plants and all new agreements with municipalities for plant construction will require municipal operation.
- To date municipalities have been reluctant to take over plant operations. This will be a serious constraint with respect to program flexibility over the next few years.

RESOURCE RECOVERY

ROLE: To develop, demonstrate and assess the technology of resource recovery as a component of integrated waste management systems and to provide a reliable supply of recovered materials for development of markets.

COMPONENTS:

- Experimental resource recovery plant;
- "Watts from Waste";
- Derelict Motor Vehicle/Waste Management Site Clean-up;
- Market development for recovered materials;
- Waste Management systems planning;

RESULTS:

- Experimental resource recovery plant to be completed March 1978, and full operation to commence;
- Detailed design of "Watts from Waste" facilities underway;
- 10,700 derelict motor vehicles collected.

PLANS AND CONSTRAINTS:

- Greater emphasis will be placed on improved and proper closure of landfill sites and less emphasis on derelict motor vehicle clean-up;
- If further funding is available the Ministry would assist municipalities with legitimate needs to develop resource recovery plants.

RESEARCH AND DEVELOPMENT

ROLE: To support projects directed towards the solution of health-related environmental problems, employing funds generated through The Provincial Lottery.

COMPONENTS AND RESULTS:

- . 9 projects are currently being funded including:
 - clean-up of abandoned mine sites, and
 - remedial measures for radiation control in Elliot Lake.

PLANS AND CONSTRAINTS:

It is intended to provide greater support to research related projects in future years, particularly those concerned with hazardous contaminants.

ENVIRONMENTAL CONTROL OF PESTICIDES

ROLE: To promote the safe and proper use of pesticides.

COMPONENTS:

- Assess potential problems and develop regulations for use of pesticides;
- License pest control companies, pesticide applicators and pesticide vendors;
- Undertake inspections for compliance to proper use of pesticides;
- Support research into the potential environmental hazards caused by pesticides use;

RESULTS:

- Issued - 11,000 licences in 1977
- Undertook - 4,000 inspections in 1977
- 20 research projects supported.

NOISE CONTROL

ROLE: To investigate the sources of sound and vibration, evaluate their impact on the environment and develop measures for their control within a Federal/Provincial/Municipal framework.

COMPONENTS:

- Develop strategies for noise control in the environment;
- Investigate noise complaints;
- Assess proposed land-use and industrial projects;

RESULTS:

- Assisted - 40 municipalities to develop appropriate noise bylaws
- Investigated - 400 noise complaints
- Reviewed - 400 projects

PLANS AND CONSTRAINTS:

The Ministry will continue to encourage municipalities to adopt noise control bylaws.

PRIORITIES

The nature of the Ministry of the Environment program does not lend itself to assessment of priorities for the purpose of discontinuing activities of least importance. This is because:

- (1) The goal and program objectives of the Ministry are consistent, closely integrated and mutually supportive.
- (2) Approximately 78% of expenditures are committed by contract as follows:

<u>Output</u>	<u>Committed by Contract (As % of MOE Budget)</u>
Water and Sewage Works Construction	62.9
Operation of Water and Sewage Works	12.4
Resource Recovery	1.6
Research and Development (Lottery Funding)	1.2
	78.1 %

- (3) Salaries, wages and benefits constitute 11.4% of the budget.

Therefore, if lay-offs are to be avoided the proportion of the budget committed amounts to 89.5%. As a result, the entire impact of a spending reduction falls on little more than 10% of the total dollars, leaving little flexibility for adjustment.

The most practical means for the Ministry to absorb financial constraints, including both those imposed by the central agencies and those necessitated to release funds for new initiatives, is by contraction of activities. A feature of MBR systems development has been the establishment of systems to set priorities within activities and these have proved of particular value when reductions were called for.

The remainder of this section takes the form of tables to show the following:

1. Output identified,
2. Percentage of MOE expenditures,
3. A priority statement to indicate:

- the level of contractual commitments,
- the scheme of internal assessment of priorities,
- other priority concerns,
- components of lowest priority and other potential for adjustment to constraints.

Note that the outputs identified in the table are not classified in priority order.

Output	% of MOE Funding	Priority Statement
Water and Sewage Works Construction	67.6 %	<ul style="list-style-type: none"> . MOE construction activities are committed to the extent of 93% to allow for carry-over from 1977-78. . Proposals for new construction or assistance are assessed for priority using as criteria the project contribution to: <ul style="list-style-type: none"> - removal of health hazards, - accommodation of growth, - environmental protection. . These activities contribute substantially to employment. <p><u>Potential for Adjustment to Constraint</u></p> <ul style="list-style-type: none"> . Construction projects of lowest MBR assessment value may be delayed until new funding is provided. . The relatively large allocation of funds (in comparison with other MOE activities), and flexibility in project scheduling, facilitates the absorption of spending constraints through cut-backs in capital works.
Operation of Water and Sewage Works	12.4 %	<ul style="list-style-type: none"> . These activities are entirely committed through agreement with the municipalities serviced. . The Province recovers all direct expenditures through service charges. <p><u>Potential for Adjustment to Constraint</u></p> <ul style="list-style-type: none"> . A reduction in this output is contingent on the success of a policy to transfer operating responsibilities to municipalities.

Output	% of MOE Funding	Priority Statement
Municipal & Private Pollution Management	7.6 %)))))	<ul style="list-style-type: none"> . This is the core of the Ministry where criteria and standards are established, abatement and management strategies developed and enforcement procedures implemented. All other activities relate to it.
Industrial Pollution Management	6.6 %)))))	<ul style="list-style-type: none"> . The priority of components of the outputs can be assessed on the following criteria: <ul style="list-style-type: none"> - provision for health protection, - provision for environmental protection, - public or political concern, - support to other MOE outputs, - support for general government objectives, - existance of contractual commitments. . Also to be considered are: <ul style="list-style-type: none"> - opportunities for deregulation, - opportunities for transfer of responsibility, - opportunities for job creation.

Potential for Adjustment to Constraints

The components of these outputs are highly integrated. The following are of lowest priority:

- . Municipal & Private Pollution Management:
 - responding to complaints,
 - monitoring recreational lakes.
- . Industrial Pollution Management:
 - responding to complaints

Output	% of MOE Funding	Priority Statement
Resource Recovery	2.2 %	<ul style="list-style-type: none"> . The main expenditures: <ul style="list-style-type: none"> - Experimental plant completion and operation, - Watts from Waste transfer payments, are committed by agreements. . A priority setting system has been developed for implementation of new capital projects, but these are contingent on provision of new funds. This would assist new job creation. <p><u>Potential for Adjustment to Constraints</u></p> <p>The component of lowest priority is:</p> <ul style="list-style-type: none"> - Derelict Motor Vehicle/Waste Management Site Clean-up.
Research and Development (Funded)	0.9 %	<ul style="list-style-type: none"> . Funded through the Provincial Lottery; . Projects are selected by a system of priorities; . These activities support employment in science and technology. <p><u>Potential for Adjustment to Constraints</u></p> <p>Funds committed through trust fund.</p>
Control of Pesticide Use	0.3 %	<p><u>Potential for Adjustment to Constraints</u></p> <p>Spending reduction difficult to apply.</p>

Output	% of MOE Funding	Priority Statement
Noise Control	0.3 %	<p><u>Potential for Adjustment to Constraints</u></p> <p>Spending reduction difficult to apply.</p>

RELATIONSHIP WITH OTHER MINISTRIES

The responsibilities of the Ministry of the Environment bring about widespread contacts with other areas of government and the private sector, and it is necessary to explain these relationships as a whole to understand those within the Resource Policy Field.

Production of waste and its discharge into the air and water and into land is inevitable. Only, however, when the nature and quality of waste starts to interfere with natural systems and processes and with other human uses do complaints of pollution arise. The problems appear to increase with population and economic growth and broadly include other such aspects as excessive dust, noise, pesticides and hazardous substances and congestion.

In the absence of incentives or constraints, waste will be disposed of as cheaply and with as little trouble to the producer as possible, notwithstanding that these actions are imposing costs in the form of damages on other people, property and the natural environment.

Experience has shown that costs of heavy pollution place an unreasonable burden on society. At the same time there is a limit to efforts towards waste reduction and investment in abatement processes. The function of the Ministry of the Environment is to minimize costs. In doing so, the Ministry finds itself working with or against the activities of other agencies.

Where another Ministry is involved in waste production it will likely come in conflict with MOE and by contrast, where the aim is to reduce pollution, then Ministry efforts will support one another.

A survey has been made of inter-Ministry relationships within the Resource Policy Field and as expected, a complex pattern was indicated. There is not thought to be much value, however, in listing activities and identifying them as areas of conflict or otherwise between MOE and other Ministries. This would be merely to emphasize the obvious.

However, noteworthy features of MOE branch responses to the survey were:

- (1) Acknowledgement that excellent cooperation exists in many areas;
- (2) Recognition that improvements to remove areas of duplication and encourage cooperation are essential.

Examples of needs for improved cooperation are summarized below:

- Duplication of public hearings - Procedures to be established under the Environmental Assessment Act may resolve this problem.
- Duplication of effort and lack of cooperation, particularly where a compromise is needed and each party works to justify his position, with respect to such issues as:
 - Water Permit Program needs and dam approval;
 - Irrigation needs and stream flow;
 - Fish production and water quality on use of water bodies for receiving treated waste;
 - Flood control and water quality;
 - Drainage works and water quality;
 - Location of industry and water quality;
 - Salt drainage to crops and groundwater;
 - Residential housing development and encroachment on sewage plants, airports, farms, industries and other sources of nuisance.
- Cooperation could be improved over such matters as sample collection, stabilization of mineral tailings, and coordination of program of water and sewage works construction by MOE, Ministry of Housing, TEIGA, Ministry of Northern Affairs and others.

GENERAL GOVERNMENT OBJECTIVES AND STRATEGIC THRUSTS

ONTARIO GOVERNMENT OBJECTIVES	MINISTRY OUTPUTS							
	Municipal and Private Pollution Management	Industrial Pollution Management	Water and Sewage Works Construction	Operation of Water and Sewage Works	Resource Recovery	Research and Development	Environmental Control of Pesticides	Noise Control
<u>INSTITUTIONAL:</u> Financial Constraint	X	X	X	X	X	X	X	X
Decentralization	X	X	X	X				
Maintain Edmonton Commitment			X		X			
Simpler Government			X	X				
<u>SOCIAL:</u> Maintain Quality of Life	X	X	X	X	X	X	X	X
Regional Equity			X	X				
Regional Development			X	X				
Protect Agricultural Land	X	X					X	
Job Creation			X		X			
Protect Environment	X	X	X	X	X	X	X	X
Equality for Women				(General Policy)				
Human Rights				(General Policy)				
<u>ECONOMIC:</u> Balanced Budget - 1980/81	X	X	X	X	X	X	X	X
Make Room for Private Sector					X			

STRATEGIC THRUSTS

Waste Utilization:

The recovery of resources from wastes and the derivation of energy from refuse are important concerns of the Ministry of the Environment and are strongly supportive of other Ministry and Government objectives such as:

- Energy conservation
- Job creation
- Protection of agricultural land
- Privatization

Waste utilization should become an integral part of the strategy.

Hazardous Materials:

The Ministry of the Environment has an obvious concern for hazardous contaminants in the environment. However, these materials are often used throughout the Province in the workplace and in homes. A number of Ministries have programs to control hazardous materials in various forms and for various uses. This common interest in hazardous materials should be reflected as part of the Policy Field Strategy.

Encouragement of Municipal Responsibility:

The Ministry of the Environment is actively encouraging municipalities to undertake their own construction of water and sewage works with provincial assistance and to undertake the operation of water and sewage works rather than request Provincial construction and operation.

Several Ministries are now involved in providing for water and sewage services such as the Ministry of Housing and the Ministry of Northern Affairs. It is suggested that the complementary roles of providing such services could be utilized to greater advantage by the Government if the Ministry of the Environment is considered as the utility provider in the implementation of Provincial policies and the effector of water and sewage projects for the Province regardless of which Ministry plans and budgets for the development involved.

Managing Within Constraints:

As indicated throughout this report the Ministry of the Environment has little flexibility to reallocate resources due to a number of constraints and commitments and this is likely the case with other Ministries as well. However, there is a need to utilize what limited flexibility exists to respond to new concerns and problems such as the assessment and control of the "acid rain" phenomenon. The Policy Field Strategy should take this type of need into account.



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